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BERKELEY LAW & TECHNOLOGY GROUP  
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SUITE 240  
BEAVERTON, OR 97006

EXAMINER
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MENBERU, BENIYAM

ART UNIT	PAPER NUMBER
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2625

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

09/883,195

Applicant(s)

CHIU, CHUI-KUEI

Examiner

Beniyam Menberu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION:

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Arguments***

1. Applicant's arguments, see Remarks, filed October 17, 2006, with respect to the rejection(s) of claim(s) 1, 8, and 14 under U.S. Patent No. 5917927 to Satake et al, U.S. Patent No. 5917927 to Satake et al in view of U.S. Patent No. 6285799 to Dance et al, and U.S. Patent No. 5917927 to Satake et al in view of U.S. Patent No. 4974098 to Miyakawa et al respectively have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of U.S. Patent No. 6694062 to Yang.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6694062 to Yang.

Regarding claim 1, Yang disclose a method used in a scanner (column 3, lines 46-49), said method comprising:  
providing a changeable calibration chart not built in said scanner (column 3, lines 40-49);

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capturing a plurality of information of said calibration chart at least in part by scanning said calibration chart with said scanner (column 3, lines 37-39, lines 50-53); and subjecting the information of said calibration chart to a correction means to normalize a signal value corresponding to aberrant information at least in part to correct an aberrance (column 7, lines 16-19) corresponding to said scanned calibration chart (column 3, lines 50-67; column 4, lines 1-20; The dark lines correspond to the aberrant information. Column 7, lines 25-67; column 8, lines 1-45; In equations 6, 7, 8, and 9, correction is made to the appropriate color channel by averaging the pixel values of neighboring pixel data near the defect color channel pixel thus normalizing pixel values.).

Regarding claim 3, Yang teach all the limitations of claim 1. Further Yang disclose method wherein said scanner comprises a plurality of sensor elements aligned in a direction (column 1, lines 24-28, lines 35-39).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6055071 to Kuwata et al.

Regarding claim 2, Yang teaches all the limitations of claims 1. However Yang does not disclose the method according to claim 1 further comprising: assigning a plurality of corresponding calibration values to said information with a host computer; and storing said corresponding calibration values for utilization of said image-capture apparatus.

Kuwata et al disclose method comprising: assigning a plurality of corresponding calibration values to said information with a host computer (column 27, lines 66-67; column 28, lines 1-2; column 16, lines 11-15; column 20, lines 47-50); and storing said corresponding calibration values for utilization of said image-capture apparatus (column 16, lines 16-17).

Yang and Kuwata et al are combinable because they are in the similar problem area of imaging device calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the inputting and storing of calibration value capabilities taught by Kuwata et al into the system of Yang to implement a calibration system which can accept input for calibration data from an external source.

The motivation to combine the reference is clear because calibration system can be more convenient and flexible if a user can change the values used in the calibration of a scanning system.

5. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al.

Regarding claim 4, Yang teaches all the limitations of claim 3. However Yang does not disclose a calibration chart comprising a portion of a plurality of pixels aligned in said direction and another portion of said pixels aligned orthogonal to said direction.

Dance et al disclose a calibration chart comprising a portion of a plurality of pixels aligned in said direction and another portion of said pixels aligned orthogonal to said direction (Figure 3A; column 7, lines 5-7, lines 16-18).

Yang and Dance et al are combinable because they are in the similar problem area of image system calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the calibration chart of Dance et al with the system of Yang to implement an accurate scanning system.

The motivation to combine the reference is clear because Dance et al teaches that the calibration chart is used to measure point spread function that is related to blur in imaging systems (column 1, lines 25-27; column 3, lines 20-25).

Regarding claim 5, Yang in view of Dance et al teach all the limitations of claim 4. Further Yang discloses the method according to claim 4, wherein all said pixels have a homogenous hue (column 3, lines 37-45; A white calibration paper can be considered to have pixels data that are all similar since there are no patterns on the paper.).

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al further in view of U.S. Patent No. 5513300 to Shibazaki.

Regarding claim 6, Yang in view of Dance et al teach all the limitations of claim 4. Dance et al disclose the method wherein calibration chart wherein all said pixels have different hues (Figure 3a; column 7, lines 5-15, lines 54-64). However Yang in view of Dance et al does not disclose the method according to claim 4, wherein all said pixels are outputted combined with an object article.

Shibazaki discloses method of forming combined images of pixel data from two sources (column 3, lines 50-53, lines 54-57, lines 59-61, lines 65-67; column 4, lines 24-25; Figure 1, reference 301,300,400).

Yang, Dance et al, and Shibazaki are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the multiple color calibration chart taught by Dance et al and the image combining method of Shibazaki into the calibration system of Yang to implement calibration system with capability of combining calibration image with scanned image.

The motivation to combine the reference is clear because Shibazaki teaches that overlapping images are used to improve the quality of print (column 1, lines 30-32) and Dance et al teaches that the calibration chart is used to measure point spread

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function that is related to blur in imaging systems (column 1, lines 25-27; column 3, lines 20-25).

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 5359458 to Melman et al.

Regarding claim 7, Yang teaches all the limitations of claims 1. However Yang does not disclose the method, wherein said correction means comprises a low-pass filter.

Melman et al disclose the method of calibration wherein said correction means comprises a low-pass filter (column 13, lines 66-68; column 14, lines 1-7).

Yang and Melman et al are combinable because they are in the similar problem area of imaging system calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the low-pass filter correction with the system of Yang to implement an accurate scanning system.

The motivation to combine the reference is clear because Melman et al teaches that the high frequency components like dust are not desirable for a scanning (column 13, line 68, column 14, line 1-3).

8. Claims 8, 9, 10, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al.



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Regarding claim 8, Yang discloses a calibration method of improving an output performance of an article captured by a scanner, said method comprising (column 3, lines 46-49):

providing a changeable calibration chart (column 3, lines 40-49);

scanning said calibration chart for capturing a plurality of information of all said pixels (column 3, lines 37-39, lines 50-53); and

subjecting said information of all said pixels to a correction means at least in part to normalize a signal value corresponding to aberrant information at least in part to correct aberration (column 7, lines 16-19) of a portion of said pixels (column 3, lines 50-67; column 4, lines 1-20; The dark lines correspond to the aberrant information. Column 7, lines 25-67; column 8, lines 1-45; In equations 6, 7, 8, and 9, correction is made to the appropriate color channel by averaging the pixel values near the defect thus normalizing pixel values.). However Yang does not disclose wherein said changeable calibration chart comprises a portion of a plurality of pixels aligned in a direction and another portion of said pixels aligned orthogonal to said direction.

Dance et al disclose wherein said changeable calibration chart comprises a portion of a plurality of pixels aligned in a direction and another portion of said pixels aligned orthogonal to said direction (Figure 3A; column 7, lines 5-7, lines 16-18).

Yang and Dance et al are combinable because they are in the similar problem area of image system calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the calibration chart of Dance et al with the system of Yang to implement an accurate scanning system.

The motivation to combine the reference is clear because Dance et al teaches that the calibration chart is used to measure point spread function that is related to blur in imaging systems (column 1, lines 25-27; column 3, lines 20-25).

Regarding claim 9, Yang in view of Dance et al teach all the limitations of claim 8. Further Yang discloses the method, wherein said plurality of pixels are not built in said scanner (column 3, lines 44-49).

Regarding claim 10, Yang in view of Dance et al teach all the limitations of claim 8. Further Yang discloses the method according to claim 4, wherein all said plurality of pixels have a homogenous hue (column 3, lines 37-45. A white calibration paper can be considered to have pixels data that are all similar since there are no patterns on the paper.).

Regarding claim 13, Yang further in view of Dance et al teach all the limitations of claim 8. Further Yang disclose the method according to claim 8, wherein said scanning step comprises scanning said calibration chart with a linear sensor array of said scanner wherein said linear sensor array comprises a plurality of sensor elements aligned in said direction (column 1, lines 24-28, lines 35-39).

9. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al further in view of U.S. Patent No. 5513300 to Shibazaki.

Regarding claim 11, Yang in view of Dance et al teach all the limitations of claim 8. Further Dance et al disclose the method, wherein all said pixels have different hues (Dance et al: Figure 3a; column 7, lines 5-15, lines 54-64). However Yang in view of Dance et al does not disclose whereby all said pixels are outputted combined with said article.

Shibazaki discloses whereby pixels are outputted combined with said article (Shibazaki: column 3, lines 50-53, lines 54-57, lines 59-61, lines 65-67; column 4, lines 24-25; Figure 1, reference 301, 300,400).

Yang, Dance et al, and Shibazaki are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the multiple color calibration chart taught by Dance et al and the image combining method of Shibazaki into the calibration system of Yang to implement calibration system with capability of combining calibration image with scanned image.

The motivation to combine the reference is clear because Shibazaki teaches that overlapping images are used to improve the quality of print (column 1, lines 30-32) and Dance et al teaches that the calibration chart is used to measure point spread function that is related to blur in imaging systems (column 1, lines 25-27; column 3, lines 20-25).

10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al further in view of U.S. Patent No. 5359458 to Melman et al.

Regarding claim 12, Yang in view of Dance et al teach all the limitations of claim 8. However Yang in view of Dance et al does not disclose the method, wherein said correction means comprises a low-pass filter.

Melman et al disclose the method of calibration wherein said correction means comprises a low-pass filter (column 13, lines 66-68; column 14, lines 1-7).

Yang, Dance et al, and Melman et al are combinable because they are in the similar problem area of imaging system calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the low-pass filter for correction as taught by Melman et al with the system of Yang in view of Dance et al to implement an accurate scanning system.

The motivation to combine the reference is clear because Melman et al teaches that the high frequency components like dust are not desirable for a scanning (column 13, line 68, column 14, line 1-3).

11. Claims 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al.

Regarding claim 14, Yang disclose a method of capturing calibration information used in a scanner (column 3, lines 46-49), said method comprising; providing a changeable calibration chart (column 3, lines 40-49);

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scanning all said pixels with a linear sensor array in said scanner, said linear sensor array comprising sensor elements aligned in a direction and moving orthogonal to said direction for building said calibration information of said calibration chart (column 1, lines 24-28, lines 35-42; column 3, lines 37-39; column 4, lines 42-46); and

subjecting said calibration information to a correction means at least in part to normalize a signal value corresponding to aberrant information (column 7, lines 16-19; column 3, lines 50-67; column 4, lines 1-20; The dark lines correspond to the aberrant information. Column 7, lines 25-67; column 8, lines 1-45; In equations 6, 7, 8, and 9, correction is made to the appropriate color channel by averaging the pixel values near the defect thus normalizing pixel values.). However Yang does not disclose calibration chart comprising a plurality of pixels arranged in a two-dimensional array.

Dance discloses calibration chart consisting of a plurality of pixels arranged in a two-dimensional array (Figure 3A; column 7, lines 5-7, lines 16-18).

Yang and Dance et al are combinable because they are in the similar problem area of image system calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the calibration chart of Dance et al with the system of Yang to implement an accurate scanning system.

The motivation to combine the reference is clear because Dance et al teaches that the calibration chart is used to measure point spread function that is related to blur in imaging systems (column 1, lines 25-27; column 3, lines 20-25).

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Regarding claim 17, Yang in view of Dance et al teach all the limitations of claim 14. Further Yang discloses the method according to claim 14, wherein all said pixels have a homogenous hue (column 3, lines 37-45).

12. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al further in view of U.S. Patent No. 5359458 to Melman et al.

Regarding claim 15, Yang in view of Dance et al teach all the limitations of claim 14. However Yang in view of Dance et al does not disclose the method according to claim 14, wherein said correction means comprises a low-pass filter at least in part to correct aberration of a portion of said pixels.

Melman et al disclose wherein said correction means comprises a low-pass filter at least in part to correct aberration of a portion of said pixels (column 13, lines 66-68; column 14, lines 1-7).

Yang, Dance et al, and Melman et al are combinable because they are in the similar problem area of imaging system calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the low-pass filter for correction as taught by Melman et al with the system of Yang in view of Dance et al to implement an accurate scanning system.

The motivation to combine the reference is clear because Melman et al teaches that the high frequency components like dust are not desirable for a scanning (column 13, line 68, column 14, line 1-3).

13. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al further in view of U.S. Patent No. 6055071 to Kuwata et al.

Regarding claim 16, Yang et al in view of Dance et al teach all the limitations of claim 14. However Yang in view of Dance et al does not disclose the method further comprising assigning a plurality of calibration values to said calibration information with a computer connected with said scanner.

Kuwata et al disclose the method further comprising assigning a plurality of calibration values to said calibration information with a computer connected with said scanner (column 27, lines 66-67; column 28, lines 1-2; column 16, lines 11-15; column 20, lines 47-50; Figure 21, reference 321, 101).

Yang, Dance et al, and Kuwata et al are combinable because they are in the similar problem area of imaging system calibration.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the inputting and storing of calibration value capabilities taught by Kuwata et al into the system of Yang in view of Dance et al, to implement a calibration system which can accept input for calibration data from an external source.

The motivation to combine the reference is clear because calibration system can be more convenient and flexible if a user can change the values used in the calibration of a scanning system.

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14. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6694062 to Yang in view of U.S. Patent No. 6285799 to Dance et al further in view of U.S. Patent No. 5513300 to Shibazaki.

Regarding claim 18, Yang in view of Dance et al teach all the limitations of claim 14. Further Dance et al disclose wherein all said pixels have different hues (Dance et al: Figure 3a; column 7, lines 5-15, lines 54-64). However Yang in view of Dance et al does not disclose whereby pixels are outputted combined with a scanned article.

Shibazaki discloses whereby pixels are outputted combined with a scanned article (Shibazaki: column 3, lines 50-53, lines 54-57, lines 59-61, lines 65-67; column 4, lines 24-25; Figure 1, reference 301, 300,400).

Yang, Dance et al, and Shibazaki are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the image combining method of Shibazaki into the calibration system of Yang in view of Dance et al to implement calibration system with capability of combining calibration image with scanned image.

The motivation to combine the reference is clear because Shibazaki teaches that overlapping images are used to improve the quality of print (column 1, lines 30-32).



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***Other Prior Art Cited***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5710871 to Tadenuma et al disclose color reading of images with calibration.

U.S. Patent No. 6459825 to Lippincott discloses scanner with calibration capabilities.

U.S. Patent Application Publication Pub. No. US 2006/0280360 A1 to Holub discloses calibration for color imaging apparatus.

U.S. Patent No. 6753914 to Frost discloses normalizing system for imaging apparatus.

***Conclusion***

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beniyam Menberu whose telephone number is (571) 272-7465. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on (571) 272-7471. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600. The group receptionist number for TC 2600 is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.



For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Patent Examiner**

Beniyam Menberu

BM

01/04/2007

  
  
KIMBERLY WILLIAMS  
SUPERVISORY PATENT EXAMINER

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